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### METECROLOGICAL DATA REPORT

19504pm opps Minelian Sp. 1025 Remain Sp. 1-37 26 July 1979

White Sands Meteorplosical Team

ACCOUNTED TO CONTRACT A MARKOTT Barto I Sancio Resourch! Barton, Serv Herror

# 14 ERADCOM/ASL-DR-1946

SECURITY CLASSIFICATION OF THIS PAGE (When Date Entered) **READ INSTRUCTIONS** REPORT DOCUMENTATION PAGE BEFORE COMPLETING FORM 1. REPORT NUMBER 2. GOVT ACCESSION NO. 3. RECIPIENT'S CATALOG NUMBER DR 1046 4. TITLE (and Subtitle) 5. TYPE OF RECOST A PERIOD COVERED 19304DT GSRS, Missile Number 1035 Round Number V-57, 7. AUTHOR(e) 8. CONTRACT OR GRANT NUMBER(.) DA Took 1T665762D126#02 White Sands Meteorological Team 9. PERFORMING ORGANIZATION NAME AND AUDRESS 11. CONTROLLING OFFICE NAME AND ACCHESS US Army Electronics Research & Development Comd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico 88002 14. MONITORING AGENCY NAME & ADDRESS(II different from Controlling Office) 15. SECURITY CLASS. (of this report) US Army Electronics Research & Development Comd UNCLASSIFIED 154. DECLASSIFICATION DOWNGRADING 16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited. 9) Meteoro logical data repto, 17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, If different from Repu 18. SUPPLEMENTARY NOTES 19 KEY WORDS (Continue on reverse elde if necessary and identify by block number) 1. Ballistics 2. Meteorology 3. Wind 20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gather for the launching of 19304DT GSRS, Missile Number 1035 Round Number V-57, are presented in tabular form.

		CONTENTS	PAGE
INTR	ODUCT	ION	- 1
DISC	ussio	N	- 1
MAP-			- 2
TABL	ES		
	1.	Surface Observation Taken at 0900 MDT at LC-33	- 3
	2.	Anemometer-Measured Wind Speed and Direction, LC-33 Fixed Pole, Taken at 0900 MDT	- 4
	3.	Anemometer-Measured Wind Speed and Direction, Tower Levels 1, 2, 3, and 4, taken at 0900 MDT	- 5
	4.	LC-33 Pilot Balloon Measured Wind Data at 0900 MDT	- 6-7
	5.	Nick Site Pilot Balloon Measured Wind Data at 0900 MDT	- 8-9
	6.	SMR-Significant Level Data at 0800 MST	- 10
	7.	SMR Upper Air Data at 0800 MST	- 11-15
	8.1	SMR MRN Significant Level Data 0800 MST	- 16
	9.	SMR Mandatory Levels at 0800 MST	- 17
	10.	SMR MRN Mandatory Levels at 0800 MST	- 18

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#### INTRODUCTION

19304DT GSRS , Missile Number 1035 , Round Number V-57 , was launched from LC-33 , White Sands Missile Range (wSMR). New Mexico, at 0900 MDT, 26 July 1979 . The scheduled launch time was 0900 MDT.

#### DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

#### 1. Observations

#### a. Surface

- (1) Standard surface observations to include pressure, temperature (°C), relative humidity, dew point (°C), density  $(gm/m^3)$ , wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.
- (2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

#### b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

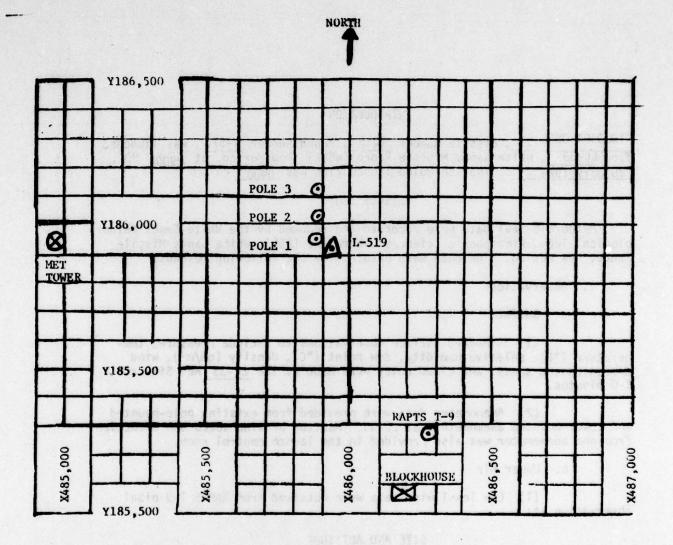
#### SITE AND ALTITUDE

LC-33 1020 Meters NICK 1110 Meters

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 94,000 feet in 500-feet increments.

SITE AND TIME

SMR 0800 MST



 MET TOWER - 4 Bendix Model T-20 Anemometers at 12 ft, 62 ft, 102 ft, and 202 ft with E/A recorders.

SHIT DEK THE .

- 2. POLE ANEMOMETER Bendix Model T-120 with E/A recorders.
  - (a) Pole #1 38.7 ft
  - (b) Pole #2 53.0 ft
  - (c) Pole #3 83.6 ft
- 3. RAPTS T-9 Radar Automatic Pilot-Balloon Tracking System T-9 Radar.

TABLE 1. Surface observations taken at LC-33 26 July 1979 at 0900 MDT, 19304DT GSRS, Missile No. 1035, Round No. V-57.

TABLE C. 10-33 FINES POLE ANTHONYTER-NEASONED WINDS

ELEVATION	3977.3	FT/MSL
PRESSURE	881.9	MBS
TEMPERATURE	22.9	•c
RELATIVE HUMIDITY	69	<u> </u>
DEW POINT	16.8	•c
DENSITY	1030	GM/H3
WIND SPEEC	05	MPH
WIND DIRECTION	40	DEGREES
CLOUD COVER	CLEAR	

\$2.51000 -00.510,6864 - \$0.878.8884 - \$0.31.0

TABLE 2. LC-33 FIXED POLE ANEMOMETER-MEASURED WINDS

	POLE #1			POLE #2			POLE #3	
T-TIME. SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR	SPEED
-30	165	07	-30	174	07	-30	163	09
-20	174	07	-20	165	07	-20	177	10
-10	180	08	-10	159	08	-10	176	08
0.0	178	05	0.0	171	08	0.0	180	08
+10	167	06	+10	170	07	+10	151	09

Туре	19304 GSF	RS	_, Missil	e No.	1035	, Round No.	V-57	launched
from		on	26 July	1979	at	0900 MDT .		
	POLE #1 =	X485	,874.29	Y185	,958.90	H4018.74	38.7 f	t. AGL
	POLE #2 =	X485	,874.93	Y186	,012.00	H4033.57	53.0 f	t. AGL
	POLE #3 =	X485	,877.29	Y186	,116.06	H4063.92	83.6 f	t. AGL

NOTE: Wind directions are referenced to the firing azimuth or true north true north.

TABLE 3. LC-33 METEOROLOGICAL TOWER ANEMOMETER-MEASURED WINDS (202 FT. TOWER)

ngger ut	EVEL #1 12 ft.		LEVEL #2 62 ft.				
T-TIME SEC	DIR DEG	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH		
-30	038	05	-30	159	06		
-20	042	05	-20	148	07		
-10	040	03	-10	143	06		
0.0	048	04	0.0	159	08		
+10	042	03	+10	157	07		
LEVEL #3 102 ft.			LEVEL #4 202 ft.				
T-TIME SEC	DIR	SPEED MPH	T-TIME SEC	DIR DEG	SPEED MPH		
-30	158	07	-30	153	07		
-20	165	06	-20	162	07		
-10	174	06	-10	162	08		
0.0	177	06	0.0	154	10		
+10	177	06	+10	151	10		

WTSM Coordinates: X484,982.64 Y185,957.73 H3983.00 (base)

Type 19304 GSRS , Missile No. 1035 , Round No. V-57 launched from LC-33 on 26 July 1979 at 0900 MDT.

NOTE: Wind directions are referenced to the firing azimuth or true north true north.

#### PILOT BALLOON MEASURED WIND DATA\*

TABLE 4			
RELEASED FROM LC-33	DATE 26 July 1979	TIML 0900	MDT
RELEASE POINT COORDINATES (	WSTM) X= 486,037.24 Y=18	32.350.16 H=3977.3	0
MISSILE TYPE 19304DT GSRS	MISSILE NO. 1035	ROUND NO. V-57	
MISSILE LAUNCHED FROM LC-3	3 DATE 26 July 197	9 TIME 0900	MDT
NOTE: WIND PIRECTIONS ARE	REFERENCED TO THE FIRING A	ZIMUTH	
OR TRUE NORTH true north			

Heights are METERS AGL METERS or FEET AGL

neights ar	e METERS AGE.	.METEVS
HE1GHT AGI_	DIRECTION DEGREES	SPEED MPH
SFC	140	05.0
30	093	02.5
60	045	02.0
90	094	01.0
120	142	02.0
150	143	07.5
180	144	12.5
210	151	12.0
240	157	11.5
270	148	10.5
300	138	09.5
330	140	10.0 70
360	141	10.0

HEIGHT AGI	DIRECTION DEGREES	SPEED MPH
390	145	10.5
420	148	10.5
450	150	11.5
480	152	12.0
510	147	16.0
540	141	19.5
570	133	19.0
600	125	18.5
630	123	20.5
660	120	22.5
690	120	22.0
720 ·	120	22.0
750	125	20.5

DELAS-MS-MT-WS Form 46 1 Sept 1979

forms 46-A & 46-B and all other Pibal forms which are obsolete.

Page 2 of 2 Pages

RELEASED FROM LC-33 DATE 26 July 1979 TIME 0900 MDT

HE IGHT AGL	DIRECTION DEGREES	SPEED MPH
780	130	19.0
810	133	17.5
840	136	16.0
870	138	17.0
900	140	17.5
930	140	17.5
960	139	17.0
990	143 .	17.0
1020	146	16.5
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HE IGHT AGL	DIRECTION DEGREES	SPEED MPH
1,117.238	2920 TS40E9	C TAXT BLLL
	o Flam LC-	SALE LADNES
#32 (1.31)	The thirt is East	it onin
	1	625 296 JULI 625 296 JULI
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		ctPT cas

## PILOT BALLOON MEASURED WIND DATA\*

TABLE 5							
RELEASED FROM_	NICK	DATE_	26 July 1	979	TIME_	0900 MD	
RELEASE POINT	COORDINATES (W	STM) X=4	70,734.56	Y= 255,	775.64	H= 4126.	57
MISSILE TYPE 1	9304DT GSRS M	ISSILE NO	. 1035	R	OUND NO.	V-57	
MISSILE LAUNCH	ED FROM LC-33		DATE _ 26 J	uly 1979	_TIME_	0900	MDT
NOTE: WIND DI	RECTIONS ARE R	EFERENCED	10 THE FI	RING AZIM	UTH		
OR TRUE NORTH	true north						

Heights are METERS AGL. METERS or FEET AGL

HEIGHT .AGL	DIRECTION DEGREES	SPEED MPH
SFC	185	4.0
30	181	6.0
60	179	8.0
90	178	10.0
120	177	12.0
150	177	13.0
180	176	15.0
210	174	13.0
240	173	16.0
270	172	18.0
300	171	20.0
330	171	23.0
360	161	13.5

HEIGHT AGL	DIRECTION DEGREES	SPEED MPH
390	159	15.5
420	157	18.0
450	156	20.0
480	155	22.0
510	133	14.0
540	137	15.0
570	141	16.5
600	144	18.0
630	147	19.0
660	149	21.0
690	137	15.0
720	145	16.0
750	151	18.

DELAS-MS-MT-WS Form 46 1 Sept 1979 forms 46-A & 46-B and all other Pibal forms which are obsolete.

						Page_	2 of	2 Pages
RELEASED	FROM	NICK	DATE	26 July 1979	_TIME_	0900		MDT

HEIGHT AGL	DIRECTION DEGREES	SPEED MPH
780	156	20.0
810	160	22.0
840	154	21.5
870	161	22.0
900	164	23.0
930	161	20.5
960	156	24.5
990	159	26.0
1020	160	26.5
1050	155	28.0
1080 1080	160	26.0
1110	160	24.5
4		

HEIGHT AGL	DIRECTION DEGREES	SPEED MPH
	,	
• 41 to 10 (a) (a)		100
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- 10 - 17 td	5 -5 1 1 10 50 15 5 15 15 15 15 15	2 19 10 20 2
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	REL.HUM. PERCENT	70.	62.0	67.	76.0	67.	0.69	56.	58.	50.0	40	42.		16.0	18.	15.	15.	32.0	12.	12.															
	. 9																																		
	URE POINT TIGRA	17.7	13.0	12.5	12.4	2.0	7.5	6.2	4.6	5.0	0.1-	7.7.		-27.3	-33.0	-35.6	35.2	-28.5	7.7	1.00															
α Σ	ERAT DEW CEN													' '	•	•	•	• 1																	
ν Σ	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE			18.7	16.6	00	13.1	6.	5.6	3.1	1.0	1.	•	5.5		8.4	10.	9.51-	0 0	0	-39.7	-46,8	8.1	5.3		174.0	174.4	1.11	-68.1	5.8	1.4	-58.9	6.0	0.00	* !
		23	20	=	=:		•	-	-		-	-		7	7	7	7		1 1	2 4	m	1	10	12	10	1		- 1	-9-	9-	9	-5	- 5	100	1
	GEOMETRIC ALTITUDE MSL FEET	10	-	-	n 4	0 4	r	5	2	<b>.</b> t	0:	++		10	4	60	2	0 (	v	) H	. 0	S	6	n 1	٥ ،		00	<b>u</b> -	t	2	6	1	~1	.:	<b>.</b>
	SEOME ALTIT MSL F	3997.	4505.1	5014.	5868.3	7270	8325	9041.	10432.	10870	2363	12743.4	2000	19433.0	2590	3520.	3346.	5053.	1007	1038	6194	9999.	1037.	3699.	7054.	.2022	1600	4007	59560.4	1972.	4965.	68857.1	. 4960	79709.7	69534.4
Ş									_																										
#S	PRESSURE MILL IBARS	880.	865.4	850.0	824.6	784	755.2	736.	700.	689.0	925.6	574.		500.0	439.	455.4	418.	100	100	272	250.0	220.	200.	175	150.0		000	00	79.0	70.	900	20.0	45.2	20.00	20.00
080																																			
258																																			
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26 JULY 79 0800 HRS MST ASCENSION NO. 258																																			
26 ASCI																																			

SIAILON ALILIOUE 3997-30 PECI MSL	L MSL
UI 7 79 0800 HRS M	YST

STATION ALTITUDE 26 JULY 79 ASCENSION NO. 2	S	3997.30 FEET MSL 0800 HRS MST 8	ET MSL MST		UPPER AIR DATA 2070060258 S M R	58 8	4 4 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	6E0DETI 32.	GEODETIC COORDINATES 32.48034 LAT DEG 106.42307 LON DEG
GEOMETRIC ALTITUDE MSL FFET	PRESSURE	TEMP AIR DEGREES	TEMPERATURE AIR DEWPOINT EGREES CENTIGRADE	REL . HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DA DIRECTION DEGREES(IN)	DATA N SPEED N) KNOTS	INDEX OF PEFRACTION
					1 (1)				
4000	880.8	23.5	17.7	20.0	1025.4	673	209.0	0.0	1.000316
4500.0		20.5	13.0	62.1	1020.0	699	190.6	8	.00029
5000.0		18.7	12.5	6.99	1008.4	667	173.6	8.9	.00026
5500.0		17.5	12.4	72.1	8.466	999	160.6	10.4	•
600000		16.7	12.2	74.7	1.085		151.5	12.3	.00028
6500.0		17.0	11.4	2.69	952.0		148.4	12.7	•
7000.0		16.3	10.2	67.2	947.4		149.5	11.6	00026
7500.0		15.3	9.1	2.99	934.3	663.5	156.3	9.6	•
80000		14.0	8.2	68.1	922.1	6-199	170.6		.00025
8500.0	750	13.5	7.3	65.8	907.2	661.3	192.0		•
0.0006		14.8	6.3	56.8	887.4	662.7	227.6	5.5	•
9500.0	723.9	14.1	5.7	56.7	873.6	661.9	269.0	6.7	1.000237
100000		13.3	5.1	57.4	9.098	6.099	292.5	7.8	•
10500.0		12.7	4.3	56.8	847.2		289.7	8.0	1.000227
11000.0	685.8	12.8	5.6	49.7	831.9		297.4		.00022
11500.0	673.4	11.8	1.3	48.3	820.1	658.9	310.4		.00021
12000.0		10.8	0:	47.0	\$ · · · · · · · · · · · · · · · · · · ·		329.6	8.5	.00020
•	b.659	10.1	-1.4	9.44	796.1		344.3	10.3	00050
13000.0		6	-3.0	41.6	783.8		354.5	13.1	1.000198
•	625.8	7.9	9.4-	800%	773.6		358.1	15.8	00019
	014.	4.9	-6.2	0.04	763.5		9.	18.4	00018
		200	-7.8	39.1	753.6	650.	2.5	20.9	0001
٠.	0.160	000	5.6-	28.2	143.8		٠. ١٠٠	22.1	000
	280.5		-10.5	27.00	10401	040	2.5	21.8	1.000177
16500.0	3.075		17.0	20.00	7.5.0	040	0.21	****	7.00017
	Suns	-	7 01-	7.20	200-2	040.0	1.01	1.61	1910001
	538.4	4-1-6	2001	20.00	2001	40.00	5.70		1.000163
	528.2	-2.5	-22.1	7000	670.3		23.5	22.0	1.000161
•	518.2	25.5	222.0	0	640		1.62	2000	/61000-1
	503.4	444	-25.6	17.3	4.600	632.5	0.01	200	•
		-5-7	-27.4	16.0	649.2	6373	200	25.6	2000
20000		-7-0	-28.2	16.3	639.6	645. A	256.4	22.3	
20500.0		-8-3	-29.1	16.7	630.2	634.2	351.5	21.4	71000
0	470.1	-9.5	-30.0	17.0	621.0	632.6	347.7	21.2	71000
:	460.9	-10.8	-30.9	17.3		631.1	3+4+6	21.3	.0001
22000.0	451.9	-12.1		17.6	605.9	629.5	342.6	-	m
:	443.1	-13.4	-32.7	17.9	594.1		341.6		.0001
:	434.4	-14.2		16.9	584.3		342.4	0	.00013

Z	ALTITUDE	3997.30	FEET	MSL
7	26 JULY 79	0800 HRS MST	HRS MS	1

SEODETIC COORDINATES 32-48034 LAT DEG 106-42307 LON DEG	INDEX OF REFRACTION	19.0 1.000129 17.0 1.000127
32.	SPEED KNOTS	19.0
	URE TEMPERATURE REL.HUM. DENSITY SPEED OF WIND DATA AIR DEWPOINT PERCENT GM/CUBIC SOUND DIRECTION SPEED ARS DEGREES CENTIGRADE METER KNOTS DEGREES(TN) KNOTS	342.4
38 58	SPEED OF SOUND KNOTS	573.9 626.3 561.6 626.8
UPPER AIR DATA 2070060258 S M R	DENSITY S GM/CUBIC METER	573.9
<b>3</b>	REL.HUM. PERCENT	15.1
T MSL	ERATURE DEWPOINT CENTIGRADE	-35.5 15.1
3997.30 FEET MSL 0800 HRS MST 58	AIR DEGREES	.3 -14.8
58	URE	87

INDEX OF REFRACTION	1.000129	1.000127	1.000125	1.000124	1.000121	1.000119	1.000116	1.000114	1.000112	1.000110	1.000108	1.000106	1.000105	1.000103	1.000101	1.000100	1.000098	1.000096	1.000095	1.000093	1.000091	1.000099	1.000068	1.000086	1.000065	1.000064	1.000062	1.000081	1.000079	1.000078	1.000077	1.000076	1.000074	1.000073	1.000072	1.000070	1.000069	0000	1.000067	1.000065			
SPEED KNOTS	19.0	17.0	14.9	13.0	12.2		12.2	12.5		15.6			21.8	20.4		15.4	12.6		4.6	9.6	10.5	•	10.8	11.0	11.9	13.3	14.8	14.4	13.8		15.0		19.0		18.7								
WIND DATA DIRECTION SPEED DEGREES(TN) KNOTS	342.4	341.7	340.6	339.7	340.6	344.2	350.4	358.7	7.4	10.5	11.0	8.2	5.5	1.0	357.3	353.6	352.2	352-1	352.4	352.9	351.7	350.6	349.6	349.5	349.5	346.0	342.2	336.4	329.5	327.2	325.4	327.7	329.6	329.5	329.3	3265							
SPEED OF SOUND KNOTS	626.3	626.8	626.1	625.5	624.4	623.3	622.2	621.1	619.6	618.2	616.7	615.3	613.8	612.4	610.9	4.609	608.0	606.5	605.6	9.4.09	603.7	602.9	601.4	599.6	597.8	595.9	594.2	592.6	591.0	589.4	567.7	586.1	584.5	583.0	581.4	579.9	574.4	576.8	575.3	573.8			
DENSITY S GM/CUBIC METER	573.9	561.6	9.155	541.8	532.7	523.9	515.2	506.7	498.5	490.5	482.6	474.9	467.3	459.8	452.5	445.2	438.1	431.2	423.3	415.5	407.9	400.5	393.7	387.5	381.4	375.4	369.5	362.9	350.8	350.8	344.9	339.1	333.1	327.2	321.4	315.7	310.0	304.3	298.8	93.			
REL.HUM. PERCENT	15.1	15.8	23.5	31.2	27.4	22.2	17.0	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	13.0**	10.1**	7.2**	4.3*	1.4**						. 7.5															
TEMPERATURE AIR DEWPOINT GREES CENTIGRADE	-35.5	-34.7	-31.1	-28.7	-30.8		-37.1	-41.2	-42.1	-42.9	-43.8	-44.7	-45.6	-46.5	-4.7.4	-48.3	-49.2	-50.1	-52.8	-56.1		1.69-																					
AIR DEGREES	-14.8	-14.4	-14.9	-15.5	-16.4	-17.3	-18.2	-19.1	-20.5	-21.4	-22.6	-23.8	-24.9	-26.1	-27.3	-28.5	-29.6	-30.8	-31.5	-32.3	-33.0	-33.7	-34.8	-36.3	-37.7	-39.1	-40.5	-41.7	-43.0	-44.3	-45.6	-46.8	-48.0	-49.2	-50.4	-51.6	-52.8	-53.9	-55.1	-56.2			
PRESSURE MILLIBARS	425.8		0.60#		-	-	-	-	-						-						281.2					-		-			-	-	215.3					16	87.	82.			
GEOMETRIC ALTITUDE MSL FEET	23500.0	:	:	:	-	:	:	-	-	:	:	:	:	:	:	:	:	:	:	:	33500.0	:	•	:	:	•	:	•	•	•	:	-	:	-	500	0	0	0	0				

AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

26 JULY 79 0800 HRS MST

DETIC COORDINATES 32.46034 LAT DEG 106.42307 LON DEG	INDEX OF REFRACTION		1.000063	1.000062	1.000060	1.000059	.00005	1.000057	1.000056	1.000055	1.000054	1.000052	1.000051	1.000050	100000	1.000048	1.000047	1.000046	1.000045	1.000044	1.000043	1.000042	.0000	*0000	6500001	1.000037	1.000036	1.000035	1.000034	1.000033	1.000032	1.000031	.00003	.00002	1.000028	1.000028	1.000027	1.000026	1.000025	1.000025
32.40 32.40	SPEED KNOTS	16.0	16.3	16.1	16.2	15.8	S	13.4	•	•	2.5	3.9	5.5	2.9	e.	10.6	10.3	10.1	10.7	11.7	13.0	13.2	10.4	11.4	0	12.0	15.2	15.3	15.4	15.3	15.1	14.4	13.0	11.5	12.7	14.6	16.3			19.4
	WIND DATA DIRECTION SP DEGREES(TN) KN	116	341.0	343.0	343.2	342.1	340.8	341.0	342.2	339.8	328.7	305.1	292.9	287.5	300.3	308.3	321.7	338.7	354.4	01	15.7	10.4	211.5	9.17	9.04	889.0	101.2	97.3	93.5	93.4	6.46	0.96	95.7	95.5	3	73.9	71.6	74.1	1.07	1.,,
Se Se	SPEED OF SOUND KNOTS		570.8	569.6	568.3	567.1	565.9	564.6	563.4	562.1	560.7	559.4	558.0	556.6	555.3	553.9	552.5	551.2	549.8	249.7	551.0	551.8	551.1	550.4	0.44	240.0	549.6	549.9	551.4	553.0	554.6	556.1	557.7	556.4	559.1	559.7	560.4		562.0	563.0
UPPER AIR DATA 2070060258 S M R	DENSITY GM/CUBIC METER	1	282.6	77.		266.0	260.8	255.6	50.	420	540.4	235.5	230.7	226.1	221.5		212.6	208.3	204-1	6	193.0	187.5	163.2	1/9.0	A	166.0	161.8	157.5	152.6	147.9	143.4	139.0	134.7	131.0	127.5	124.0			114.2	11110
5	REL.HUM.																																							
IT MSL MST	TEMPERATURE AIR DEWPOINT EGREES CENTIGRADE																																							
997.30 FEET MSL 0800 HRS MST	AIR DEGREES	1	-58.5	-59.4	-60.3	-61.2	-62.2	-63.1	0.49-	-65.0	-66.0	-67.0	-68.0	-69.0	-20.0	-71.0	-72.0	-73.0	-74.0	-74.0	-73.1	-72.5	13.0	17.00	7	-74.1	-74.1	-73.9	-72.8	-71.7	-70.5	4.69-	-68.2	-67.7	-67.2	-66.7	-66.3	-65.8	-65.0	-640
n &	PRESSURE MILLIBARS	170.4	174.1	169.9	165.8	161.8	157.9			146.6	143.0		•	132.5	129.2	125.9	122.8	119.7	116.7	113.	110.0	100.0	103.5	6.201	97.6	6.46	92.4	90.1	87.8	85.6	83.4	81.3	79.2	17.5	75.4	73.5	11.1	6669	2.89	000
STATION ALTITUDE 26 JULY 79 ASCENSION NO. 2	GEOMETRIC ALTITUDE MSL FEET		440000		45000.0	:	:	46500.0	:	:	:	48200.0	:		:		:	1 51500.0	22000	52500.0			0.000		200000	56000-0	-	57000.0	57500.0			1	595c0.0	0.00009	60500.0	:.	•		0.00529	0.00000

10 10 10 10 10 10 10 10 10 10 10 10 10 1						106.	06.42307 LUN DEG
PRESSURE	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL.HUM.	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION S DEGREES(IN) K	SPEED	INDEX OF REFRACTION
6.49	-63.6		107.9	564.0	78.0	19.9	
63.3	-62.8		104.9	565.0	60.3	20.9	20000
61.8	-62.1		102.0		83.1	22.1	
60.3	-61.4		59.5		85.7	23.2	
58.8	-61.1		96.7		h-06	22.0	
57.4	7-60-7		94.2		95.5	21.0	-
56.1	+-09-		91.8		97.8	20.3	7,000
54.7	-60.1		89.5		95.7	19.8	
	-59eB		87.2		93.5		
52.1	-59.5		85.0		93.5	19.8	
50.9	-59.1		82.8		94.1	20.4	.0000
49.7	-58.7		80.7		9.46	21.0	.00001
49.5	-53.0		73.5		95.8	21.5	.00001
47.3	-57.3		76.4		2.96	21.9	
46.2	-56.6		74.3		h• #6	22.4	
45.1	-55.9		72.4		89.5	22.9	
3	-55.5		70.6		84.8	23.6	.00001
3	-55.2		68.8		84.1	25.2	.00001
45.1	104°		67.1		0.48	27.0	10000
41.1	-54.5		65.5	576.1	64.3	28.7	
40.1	-54.1		63.8	576.5	9.98	30.4	.00001
39.5	-53.8		62.3	577.0	98.6	32.1	.0000
	-53.4		60.7		668	33.7	•
:	-53.1		59.2		90.3	35.1	
36.5	-52.7		57.8		2.06	36.5	1.000013
35.7	-52.4		56.3		91.2	38.1	1.000013
34.9	-52.0		54.9		91.6	39.8	
34.1	-51.7		53.6		92.1	41.5	
33.3	-51.3		52.3		95.0	41.6	1.000012
	-51.0		51.0		93.7	41.2	.00001
	-50.6		49.7		9.46	40.8	.00001
31.0	-50.3		48.5		95.3	38.6	1.000011
30.3	6.64-		47.3		7.96	36.3	.00001
59.6	-49.7		45.2		9.96	34.3	1.000010
28.9	9.61-		45.1	585.	6.56	33.8	.0000
28.3	+·6+-		0.44	582.	95.0	33.3	.0000
27.6	-49.3		43.0	582.	0.46	33.1	.00001
27.0	-49.2		42.0	563.	92.7	33.7	.00000
25.4	0.64-		41.0	583.	91.4	34.3	1.000009
9							

STATION ALTITUDE 3997.30 FEET MSL 26 JULY 79 0800 HRS MST ASCENSION NO. 258

UPPER AIR DATA 2070060258 S M R

GEODETIC COORDINATES 32.48034 LAT DEG 106.42307 LON DEG

106.42307 LON DEG	INDEX OF REFRACTION	1.000009	1.000009	1.000008	1.000008	1.000008	1.000008	1.000008	1.000007	1.000007	1.000007	1.000007	1.000007	1.000007	1.000006	1.000006	1.000006	1.000006	1.000006	1.000006	1.000006	1.000005	1.000005	
	SPEED KNOTS	34.1	33.6	33.1	32.9	32.7	32.9	35.1	37.3	39.0	38.0	37.0	36.0	34.8	33.6	32.8	37.4	42.3						
	WIND DATA DIRECTION SI DEGREES(IN) KI	91.4	92.2	92.7	91.9	91.1	90.3	4.68	9.88	87.7	86.3	84.6	83.6	84.5	85.5	87.0	92.1	96.2						
	SPEED OF SOUND KNOTS	583.6	583.7	583.9	584.1	584.3	584.4	584.6	564.8	585.0	585.2	585.3	585.6	585.9	586.2	586.5	586.8	587.1	587.4	587.7	588.0	588.4	586.7	
	DENSITY S GM/CUBIC METER	39.1	38.5	37.3	36.5	35.6	34.8	34.0	33.2	32.4	31.7	30.9	30.5	29.5	28.8	23.1	27.5	26.8	26.5	25.6	. 25.0	24.4	23.8	
	REL.HUM. PERCENT																							
	TEMPERATURE AIR DEWPOINT GREES CENTIGRADE																							
	AIR DEGREES	-48.8	9.81-	-48.5	1.81-	-48.5	-48.1	-48.0	-47.8	1-47-7	-47.5	1-47.4	-47.2	6.94-	-46.7	-46.5	-46.2	0.94-	-45.8	-45.5	-45.3	-45.1	9.44-	
NO. 258	PRESSURE MILLIBARS	25.2	54.6	24.1	23.5	23.0	22.5	22.0	21.5	21.0	50.5	20.0	19.6	19.1	18.7	16.3	17.9	17.5	17.1	16.7	16.3	16.0	15.6	
ASCENSION NO.	GEOMETRIC ALTITUDE MSL FEET	83500.0	84000.0	84500.0	85000.0	85500.0	86000.0	86500.0	87000.0	67500.0	88000.0	88500.0	89000.0	89500.0	0.00006	0.00506	91000.0	91500.0	92000.0	92500.0	93000.0	93500.0	0.00006	

STATION ALTITUDE 3997.30 FEET MSL 2070060256
26 JULY 79 0800 HRS MST S M R. ASCENSION NO. 258

GEODETIC COORDINATES 32.48034 LAT DEG 106.42307 LON DEG

ATURE PRESSURE R MILLIBARS										
TEMPERATUR		14-	64-	-55	-58	-61	-65	-68	-74	17-
DEW PT DEP DEG C	66	66	66	66	66	66	66	66	66	66
	***6666-									
DATA N-S MPS	****6666-	.5.		÷	:	;	-2.	- Se	· · ·	**
SPEED MPS	***6666									
DIRECTION DEG (TN)	****6666	• • • • • • • • • • • • • • • • • • • •	97.	90.	95.	92.	74.	96.	- 88.	<b>.</b> 0•
GEOPOTENTIAL ALTITUDE DECAMETERS	2860.	5000	2419.	2155.	2091.	1973-	1882.	1809.	1/30	1671.

\*\* WIND DATA NOT COMPUTED DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

STATION ALTITUDE 3997.30 FEET MSL 26 JULY 79 0800 HRS MST ASCENSION NO. 258

MANDATORY LEVELS 2070060256 S M R

GEODETIC COORDINATES 32.46034 LAT DEG 106.42307 LON DEG

SPEE			12.2	5.9	7.9	10.2	51.6	20.5	22.6	21.4	13.0	17.3	10.0	13.8	18.2	16.4	10.9	11.0	9.8	13.6	17.5	23.0	20.8	30.4	35.6	34.0	37.0
WIND DIRECTION	DE GREES ( )	173.5	148.8	192.7	288.7	343.5	2.6	22.3	0.4	342.4	339.7	11.5	352.1	344.6	327.2	340.6	342.2	310.7	38.8	95.8	73.8	86.3	94.5	86.7	96.5	91.6	6.48
REL . HUM. PERCENT		67.	.89	.99	58.	45.	39.	24.	16.	18.	32.	12.	13.														
TEMPERATURE R DEWPOINT	CENI ISRADE	12.5	10.9	7.3	9.4	-1.3	-8.5	-18.5	-27.3	-32.0	-28.5	-43.5	-50.1														
AIR	DEGKEES	18.7	16.8	13.6	12.6	10-1	4.6	2	-5.5	-12.4	-15.6	-22.1	-30.8	-39.7	-51.8	-58.3	-64.1	-71.3	-74.1	-68.7	-65.8	-61.3	-58.9	-54.1	8.64-	-48.7	4-7-4
GEOPOTENTIAL	3	5010.	6713.	8510.	10422.	12459.	14625.	16928,	19405.	22082.	25012.	28278.	31933.	36114.	40987.	43786.	46926.	50525.	54814.	59114.	61758.	64864.	68597.	73252.	79367.	83290.	88117.
	MILLIBARS	850-0	800-0	750.0	200.00	650.0	0.009	550.0	20000	450.0	0.004	350.0	300.0	250.0	200.0	175.0	150.0	125.0	100.0	90.0	70.0	0.09	20.0	0.04	30.0	.55.0	20.0

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MS	-	
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3997.30 FEET MSL	FRS	
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STATION ALTITUDE 39		-
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TATION ALTITUDE 3997 5 JULY 79 08 SCENSION NO. 258	E 3997.30 FEET MSL 0800 HRS MST 258	r MSL 1ST	MRN MANG	MRN MANDATORY LEVELS 2070060258 S M R		GEODETIC COOI 32.48034 106.42307	GEODETIC COORDINATES 32.48034 LAT DEG 106.42307 LON DEG
SEOPOTENTIAL ALTITUDE DECAMETERS	DIRECTION DEG (TN)	WIND DATA SPEED N MPS MI	DATA N-S MPS	E-₹ APS	DEW PT DEP	TEMPERATURE AIR DEG C	PRESSURE MILLIBARS
2686.	85.	19.	-2.	-19.	66	47.4	2.000+1
2539.	92.	17.	ċ	-17.	66	-48.7	2.500+1
2419.	.96	18.		-18.	66	8.64-	3.000+1
2233.	87.	16.	;	-16.	66	-54.1	4.000+1
2091.	95.	::	:	-11-	66	-58.9	5.000+1
1977.	86.	12.	;	-12.	66	-61.3	6.000+1
1882.	74.	• 6		-6-	66	-65.8	7.000+1
1902.	96.	7.	:	-7.	66	-68.7	8.000+1
1671.	39.	ς.		-3-	66	-74.1	1.000+2
1540.	311.	•	-4-	;	66	-71.3	1.250+2
1430.	342.	•	-5-	۶۰	66	-64.1	1.500+2
1335.	341.	8.	-9-	3.	66	-58.3	1.750+2
1249.	327.	•	÷		66	-51.8	2.000+2
1701.	345.	7.	-7.		66	-39.7	2.500+2
973.	352.	'n	.5.	:	19	-30.8	3.000+2
862.	12.	9.	•6•	-8-	21	-22.1	3.500+2
762.	340.	7.	.9.	2.	13	-15.6	4.000+2
673.	342.	11:	-10.	÷	20	-12.4	4.500+2
591.	. 7	12.	-12.	÷	22	-5.5	5.000+2
516.	. 22.	11:	-10.	į	18	2	5.500+2
*9##	3.	11.	-17-	;	13	4.6	6.000+2
380.	. 44.	'n	-5-	•	11	10.1	6.500+2
318.	289.		-1-	•	90	12.6	7.000+2
259.	193.	÷	3.	•	90	13.6	7.500+2
205.	149.	••	ů	÷-	90	16.8	8.000+2
153.	173.	'n	ů.	;	90	18.7	8.500+2